This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (currently amended) An enhanced nanocomposite comprising of:

   a powder having a surface modified nanoscale layer selected from the group consisting of metals, metal oxides, organometallics, semiconductors, alloys, carbon products, or combinations thereof, the powder having an average particle size of from about 1 nanometer to about 1 micron, a nanoscale layer having an average thickness ~~of~~ from ~~about~~ 1 nanometer to ~~about~~ 100 nanometers; and

   a nanocomposite conductive medium having an average particle size of from ~~about~~ 1 nanometer to 100 nanometers ~~about 1 micron~~ selected from the group consisting of monomers, polymers, organometallics, and combinations thereof.

2. (canceled)

3. (previously presented) The enhanced nanocomposite according to claim1, wherein the conductive medium is functionalized with a nanoscale layer having an average thickness of from about 1 nanometer to about 100 nanometers.

4. (previously presented) The enhanced nanocomposite according to claim 1, whereby the enhanced nanocomposite is assembled into a multiple layer nanocomposite.

5. (previously presented) The enhanced nanocomposite according to claim 4, wherein the multiple layer nanocomposite is subjected to a phonon or electron bias as induced by externally generated fields.

6. (previously presented) The enhanced nanocomposite according to claim 5, wherein at least one externally generated field is selected from the group consisting of ultrasonic, acoustic phonon, magnetic, electromagnetic, and electrical fields.

7. (previously presented) The enhanced nanocomposite according to claim 4, wherein the enhanced nanocomposite is assembled into a matrix comprised of at least one series of an alternating layer of nanocomposite doped with conductive additives with a layer of nanocomposite doped with semiconductor additives.

8. (currently amended) The enhanced nanocomposite according to claim 7, wherein ~~each individual layer~~ the thickness of a layer of nanocomposite doped with conductive additives is less than 100 nanometers and the thickness of a layer of nanocomposite doped with semiconductor additives is less than 100 nanometers.

9. (currently amended) The enhanced nanocomposite according to claim 7, wherein ~~each individual layer~~ the thickness of a layer of nanocomposite doped with conductive additives is less than 10 nanometers and the thickness of a layer of nanocomposite doped with semiconductor additives is less than 10 nanometers.

10. (canceled)

11. (canceled)

12. (canceled)

13. (previously presented) The enhanced nanocomposite according to claim 1 is further comprised of quantum dots wherein the flow of electrons is further enhanced by reducing the mean path length between said powders.

14. (canceled)

15. (previously presented) The enhanced nanocomposite according to claim 1, wherein the carbon products, monomers, polymers, organometallics, metals, metal oxides, and semiconductors are chemically modified by non-thermal means.

16. (previously presented) The enhanced nanocomposite according to claim 15, wherein the non-thermal means is selected from the group consisting of microwave or electron beam.

17. (previously presented) The enhanced nanocomposite according to claim 15, wherein the non-thermal means is subjected to a phonon or electron bias as induced by externally generated fields.

18. (previously presented) The enhanced nanocomposite according to claim 17, wherein the externally generated fields is selected from the group consisting of ultrasonic, acoustic phonon, magnetic, electromagnetic, or electrical fields.

19. (previously presented) The enhanced nanocomposite according to claim 1, wherein the enhanced nanocomposite is utilized within energy conversion products including products selected from the group consisting of thermionics, thermoelectric, photovoltaic, fuel cell, piezoelectrics, photoelectrics, ballistic tunneling, thermal diodes; and photon, electron, or phonon emitters.

20. (previously presented) The enhanced nanocomposite according to claim 19, wherein the enhanced nanocomposite is further subjected to a phonon or electron bias as induced by externally generated fields.

21. (previously presented) The enhanced nanocomposite according to claim 20, wherein the externally generated field is selected from the group consisting of ultrasonic, acoustic phonon, magnetic, electromagnetic, or electrical fields.

22. (previously presented) The enhanced nanocomposite according to claim 21, wherein the application of externally generated fields produces byproducts including byproducts selected from the group consisting of conductive polymers, nanotubes, nanohorns, fullerenes, or combinations thereof.

23. (canceled)

24. (currently amended) An enhanced nanocomposite assembled into an energy conversion product selected from the group consisting of thermionics, thermoelectric, photovoltaic, fuel cell, piezoelectrics, photoelectrics, ballistic tunneling, thermal diodes; and photon, electron, or phonon emitters comprising of:

a powder having a surface modified nanoscale layer selected from the group consisting of metals, metal oxides, organometallics, semiconductors, alloys, carbon products, or combinations thereof, the powder having an average particle size of from ~~about~~ 1 nanometer to 100 nanometers ~~about 1 micron~~, a nanoscale

layer having an average thickness of from ~~about~~ 1 nanometer to ~~about~~ 100 nanometers; and

a nanocomposite conductive medium having an average particle size of from ~~about~~ 1 to 100 ~~about 500~~ nanometers.

25. (currently amended) An enhanced nanocomposite assembled into matrix comprised of at least one series of an alternating layer of nanocomposite doped with conductive additives with a layer of nanocomposite doped with semiconductor additives comprised of:

a powder having a surface modified nanoscale layer selected from the group consisting of metals, metal oxides, organometallics, semiconductors, alloys, carbon products, or combinations thereof, the powder having an average particle size of from about 1 nanometer to about 1 micron, a nanoscale layer having an average thickness of from ~~about~~ 1 nanometer to ~~about~~ 100 nanometers; and

a nanocomposite conductive medium having an average particle size of from ~~about~~ 1 to 100 ~~about 500~~ nanometers.

26. (new) The enhanced nanocomposite assembled into matrix according to claim 24, wherein the powder has an average particle size from 1 nanometer to 10 nanometers.

27. (new) The enhanced nanocomposite assembled into matrix according to claim 25, wherein the thickness of a layer of nanocomposite doped with conductive additives is less than 10 nanometers and the thickness of a layer of nanocomposite doped with semiconductor additives is less than 10 nanometers.

28. (new) The enhanced nanocomposite assembled into matrix according to claim 24, wherein the nanocomposite is subjected to a phonon or electron bias as induced by externally generated fields.

29. (new) The enhanced nanocomposite assembled into matrix according to claim 24, wherein the nanocomposite is subjected to a phonon or electron bias as induced by externally generated fields.